

Patterson Farms Methane Digester Project

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Patterson Family Farming

1828-2007

7th Generation now Living in original house.



Patterson Family Farming

1938: Fairfield Farms



Patterson Family Farming

1972 W. W. Patterson, Inc.



From Ashes to Agribusiness

1990: 100 Cow
Barn Destroyed
in Fire



1992: 400 Cow
Freestall and
Double 12 Parlor



Manure Management 1998-1999

Lagoon and Compost Facility Added

Manure
Solids
Separated
and Used
as
Bedding



Problem: Lagoon Manure Stinks!



But...Heated Solids Smell Like Dirt



Will Heating Liquids Have the Same Effect?

Anaerobic Digestion Becomes a Quest

RCM Digesters, Inc. Chosen
Because of Track Record

Fall 2003: 1.2 Million in Funding

PROJECT IS A GO!!



*NYSERDA

*USDA----
Rural Dev.

*AEM-Non-
point source



Fall 2004

Concrete Tank- Oct.-Dec.-04



New Electrical Service for Net Metering





Digester Filled 6/05

06/15/2005

Note Phone



Engine and Skids Arrive 8/05

Martin Machinery, LLC.



Putting the Pieces Together



Exhaust Pipe 10/05



Solids Separation





Additional Manure Storage



Second Lagoon 2007

Digester Financials
Very Difficult to Pay for with
Milk Profits

Costs: \$1,575,025

Balance Sheet: \$257,000

Original Business Plan

Swap Electric Costs/Digester

Electric Bill Savings:	\$72,000
Repairs/Supplies to System	\$46,000
Labor	<u>\$26,000</u>
Net Costs	-0-

Accepting Food Waste Complete Mix Digester



Accepting Food Waste Adds Revenue

Food Waste Permit Renewed
18,000 gallons/day

Current: 15,000 gallons/day
(\$0.06/gallon)

Revenue: \$350,000

Future Business Plans

Carbon Credits/Renewable Energy Credits

Manure Solids Sales/Improved Bedding

Profitable Use of Excess Energy (Researching)

More Electricity - Renewable Portfolio Standards

Side Business - Greenhouse or Biodiesel

Grant Possibilities – AEM for Buried Manure Pipe

Equipment for Manure Irrigation Methods

Lessons Learned

Must Be Committed to Make it Work

Talk to Other Dairy Producers

Do the Paperwork (Grants)

Stay on Top of It

Improvise, Improvise, Improvise!

Why!!!!
Patterson's 7th Generation

